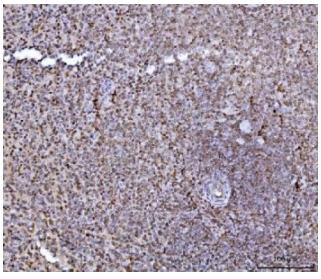
HES5 Antibody / Hairy and Enhancer of Split 5 Polyclonal Antibody (RQ6640)

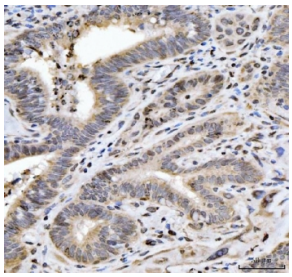
Catalog No.	Formulation	Size
RQ6640	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

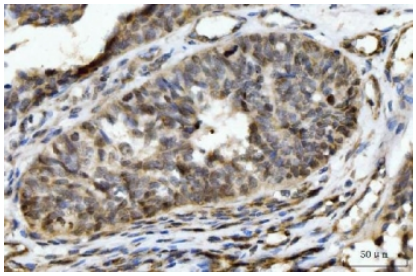
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q5TA89
Localization	Nuclear
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This HES5 Antibody / Hairy and Enhancer of Split 5 Polyclonal Antibody is available for research use only.



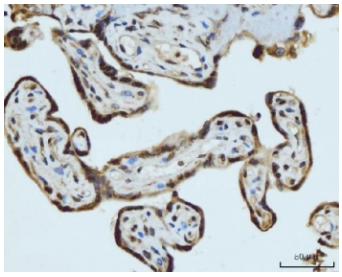
HES5 Antibody by IHC in human spleen. Immunohistochemistry of FFPE human spleen tissue using HES5 Antibody RQ6640. Brown immunoreactivity is distributed throughout the tissue, with staining visible in numerous cells across the examined section. Hematoxylin counterstains nuclei blue. Heat-induced epitope retrieval was performed by boiling sections in EDTA buffer, pH 8, for 20 minutes, followed by cooling.



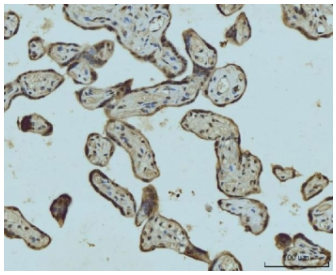
HES5 Antibody by IHC in human gallbladder adenosquamous carcinoma. Immunohistochemistry of FFPE human gallbladder adenosquamous carcinoma using HES5 Antibody RQ6640. Brown staining is evident in the malignant epithelial cells forming irregular glandular structures, with both nuclear and cytoplasmic immunoreactivity visible. Surrounding stromal cells exhibit comparatively limited staining. Hematoxylin counterstains nuclei blue. Antigen retrieval was performed using EDTA buffer, pH 8, for 20 minutes at boiling temperature.



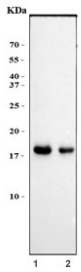
HES5 Antibody by IHC in human bladder epithelial carcinoma. Immunohistochemistry of FFPE human bladder epithelial carcinoma using HES5 Antibody RQ6640. Brown immunoreactivity is visible throughout the carcinoma cell clusters, with staining involving the cytoplasm and portions of the nuclear regions. The surrounding connective tissue shows less prominent staining. Hematoxylin counterstains nuclei blue. Heat-induced epitope retrieval was performed in EDTA buffer, pH 8, for 20 minutes.



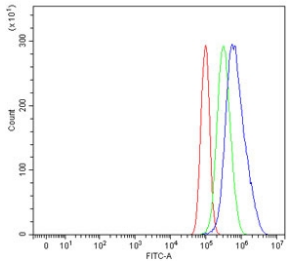
HES5 Antibody by IHC in human placenta at higher magnification. Immunohistochemistry of FFPE human placental tissue using HES5 Antibody RQ6640. Brown staining outlines the trophoblast layer surrounding chorionic villi, with additional immunoreactivity visible within portions of the villous tissue. Hematoxylin counterstains nuclei blue. Heat-induced epitope retrieval was performed by boiling sections in EDTA buffer, pH 8, for 20 minutes.



HES5 Antibody by IHC in human placental chorionic villi. Immunohistochemistry of FFPE human placental tissue using HES5 Antibody RQ6640. Multiple chorionic villi exhibit brown staining along their peripheral trophoblast layers, while the central villous regions show more variable immunoreactivity. Hematoxylin counterstains nuclei blue. Heat-induced epitope retrieval was performed using EDTA buffer, pH 8, for 20 minutes at boiling temperature.



HES5 Antibody by WB in HaCaT and HepG2 cells. Western blot analysis of human HaCaT keratinocyte (lane 1) and HepG2 hepatocellular carcinoma (lane 2) cell lysates using HES5 Antibody RQ6640. A prominent immunoreactive band is detected near 18 kDa in both samples, consistent with the predicted molecular weight of HES5. No prominent additional bands are visible within the displayed molecular weight range.



HES5 Antibody by FACS in human PC-3 cells. Flow cytometry analysis of human PC-3 prostate carcinoma cells using HES5 Antibody RQ6640 at 1 ug per million cells, following blocking with goat serum. The red histogram represents cells alone, green represents the isotype control, and blue represents HES5 antibody staining. The blue fluorescence distribution is shifted to the right of the isotype control, indicating increased antibody-associated fluorescence.

Description

HES5 Antibody / Hairy and Enhancer of Split 5 Polyclonal Antibody recognizes HES5, a member of the Hairy and Enhancer of Split family of basic helix-loop-helix transcription factors. HES5 functions primarily as a transcriptional repressor and is an important downstream effector of canonical Notch signaling. The protein contains a basic DNA-binding region, a helix-loop-helix domain involved in dimerization, and a C-terminal WRPW motif that recruits transcriptional corepressors. These structural features enable HES5 to regulate gene expression programs associated with cellular differentiation and developmental fate decisions.

HES5 is particularly important during nervous system development, where Notch signaling maintains neural progenitor populations and restricts premature neuronal differentiation. Activation of Notch receptors releases the Notch intracellular domain, which enters the nucleus and associates with RBPJ to stimulate transcription of target genes, including HES5. The resulting HES5 protein represses proneural transcription factors and helps preserve the undifferentiated state of neural progenitor cells. HES5 Antibody is therefore relevant to investigations of neural stem cell maintenance, neurogenesis, and developmental signaling.

During embryonic neurogenesis, HES5 expression is associated with proliferating neural progenitor compartments. Its activity contributes to the balance between progenitor self-renewal and neuronal commitment. HES5 also participates in regulatory interactions with other HES family proteins, including HES1, whose expression dynamics influence developmental timing and cell fate specification. Changes in HES5 activity can affect the production and differentiation of neuronal populations during central nervous system development.

Beyond neurogenesis, HES5 has been investigated in additional developmental processes and disease-associated signaling pathways. Altered Notch-HES signaling has been implicated in several cancers, although the biological consequences of HES5 expression vary with cellular context. Its transcriptional activity may influence differentiation, proliferation, and lineage-associated gene expression, making it relevant to studies of cellular plasticity and transcriptional regulation.

NSJ Bioreagents offers this HES5 Antibody for research into Notch-dependent transcriptional regulation, neural progenitor biology, and developmental cell fate decisions. Understanding HES5 activity provides insight into how extracellular signaling is translated into gene expression programs that control the balance between cellular maintenance and differentiation.

Explore our Developmental Biology Antibodies for additional research tools targeting proteins involved in Notch signaling, neural progenitor maintenance, and cell fate determination.

Application Notes

Optimal dilution of the HES5 Antibody / Hairy and Enhancer of Split 5 Polyclonal Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids M1-R121) was used as the immunogen for the HES5 antibody.

Storage

After reconstitution, the HES5 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Hairy and Enhancer of Split 5 antibody, bHLHb38 antibody, HES-5 antibody, Transcription Factor HES-5 antibody

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